

BUMPER SYSTEM WITH ENERGY ABSORBER

ABSTRACT

A bumper system includes a bumper beam having a face and ends, and an energy absorber mounted on the face. The energy absorber has a one-piece injection-molded non-foam piece with box sections and interconnecting straps, and a one-piece or multi-piece foam component securely insert-molded onto the injection-molded non-foam piece. Different foam molds can be used to form differently shaped front surfaces on the foam component. By this arrangement, different energy absorbing systems are provided for vehicles, such as to satisfy the need for different styling and shapes, while still using the same non-foam piece. By this arrangement, the energy absorber is a single unit that can be handled and attached to the bumper beam. At the same time, capital investment in molding dies and tooling is reduced.